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PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FDTC0301-PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/012749	International filing date (day/month/year) 06 October 2003 (06.10.2003)	Priority date (day/month/year) 08 October 2002 (08.10.2002)
International Patent Classification (IPC) or national classification and IPC H05K 3/46, 1/18, H01L 23/12		
Applicant DAI NIPPON PRINTING CO., LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 19 April 2004 (19.04.2004)	Date of completion of this report 04 August 2004 (04.08.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/012749

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/12749

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-24	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 2001-298273 A (Hitachi, Ltd.), October 26, 2001

Document 2: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 164627/1978 (Laid-open No. 81966/1980) (Hitachi Denshi, Ltd.), June 5, 1980

Document 3: JP 2001-53447 A (Iwaki Electronics Co., Ltd.), February 23, 2001

Document 4: JP 2001-15920 A (Toshiba Corp.), January 19, 2001

Document 5: JP 6-112623 A (Ibiden Co., Ltd.), April 22, 1994

Document 6: JP 2002-151846 A (NGK Spark Plug Co., Ltd.), May 24, 2002

Claims 1-2:

The inventions relating to claims 1-2 do not appear to involve an inventive step based on document 1, document 2, and document 3 cited in the ISR.

Document 1 describes a wiring board incorporating components, document 2 describes a connection member connecting terminals with electric/electronic components, and document 3 describes an insulation layer.

Claims 3-6:

The inventions relating to claims 3-6 do not appear to involve an inventive step based on document 1, document 2, document 3, and document 4 cited in the ISR.

Document 4 describes connecting wiring layers with conductive bumps.

Claims 7-9:

The inventions relating to claims 7-9 do not appear to involve an inventive step based on document 1, document 2 and document 3.

Document 2 describes that a connection member is solder.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Regarding the descriptions of claim 24, the invention relating to claim 24 is “a wiring board incorporating components”; however, the invention relating to claim 16 that is cited by claim 24 is “a production method for wiring board incorporating components”.

Therefore, the invention relating to claim 24 is considered to be “a production method for wiring board incorporating components”.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V.2 :

Claims 10-13, 15:

The inventions relating to claims 10-13 and 15 do not appear to involve an inventive step based on document 1, document 3, and document 5 cited in the ISR.

Document 5 describes a process for processing so that a space for positioning an electric/electronic member is created.

Claims 16-18, 20-21, 23-24:

The inventions relating to claims 16-18, 20-21 and 23-24 do not appear to involve an inventive step based on document 1, document 2 and document 3.

Document 2 describes a process for forming a through hole so that a space for positioning an electric/electronic member is created.

Claims 14, 19:

The inventions relating to claims 14 and 19 do not appear to involve an inventive step based on document 1, document 2 or document 5, document 3 and document 6 cited in the ISR.

Document 6 describes positioning an electric/electronic member after applying a support member.

Claim 22:

The invention relating to claim 22 does not appear to involve an inventive step based on document 1, document 2, document 3 and document 4.

Document 4 describes connecting wiring layers with a conductive bump.